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UDBS

URBAN DESIGN BUILD STUDIO

# teaching students to be thoughtful architects, makers, and citizens

The Urban Design Build Studio (UDBS) is a collaborative of students, professors, and allied professionals who work with community residents on implementation of appropriate, affordable, replicable design solutions.

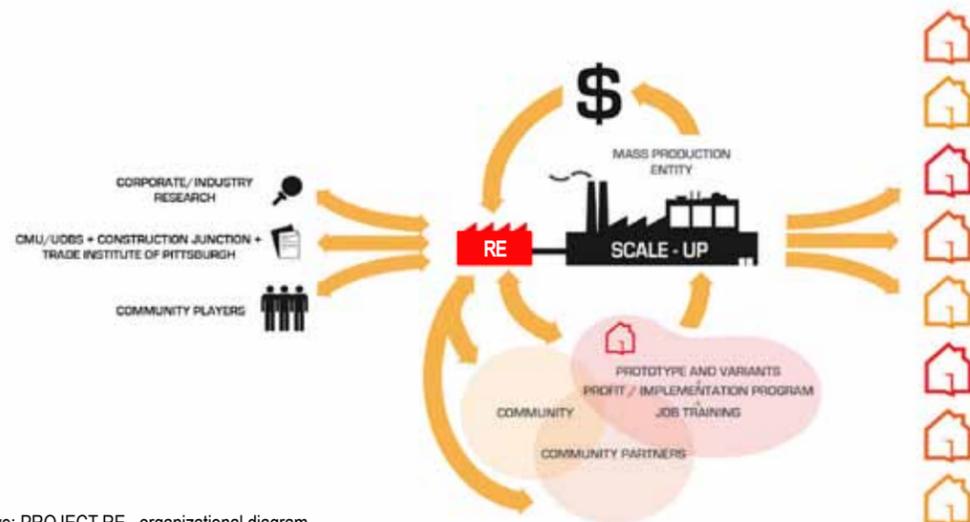
It is a Public Interest Design Entity that utilizes participatory design processes to strengthen capacities of community residents. Each year a cohort of vertically integrated students ranging in size from 12 to 25 work with communities to identify, design, and implement catalytic projects that address relevant social and economic needs.

Since 2008, the UDBS has worked on real projects, bringing university students off campus to be inspired by people who are actively advocating for their communities. Project development is dependent on the engagement of local residents, clients, and

stakeholders to help students understand existing neighborhood conditions and future aspirations. The design process is predicated on collective intelligence, is highly collaborative, and involves hands on making as an essential design tool.

## UDBS DIRECTOR

John Folan, AIA, LEED AP, is the Director of the UDBS, T. David Fitz-Gibbon Professor of Architecture, and Executive Director of PROJECT RE\_. Included in his body of work are the Smithsonian Institution National Air and Space Museum Steven F. Udvar-Hazy Center, the National Wildlife Federation Headquarters, and the United States Embassy Compound in Nairobi, Kenya. His teaching was recognized at the University of Arizona with six consecutive Robert C. Geibner Awards, the Daryl Dobras Award, and the university's highest teaching honor, The Five Star Faculty Award.



above: PROJECT RE\_ organizational diagram.

opposite: Interior of PROJECT RE\_ community room featuring reused church pews as ceiling diffusers and reclaimed slate chalkboard wall.



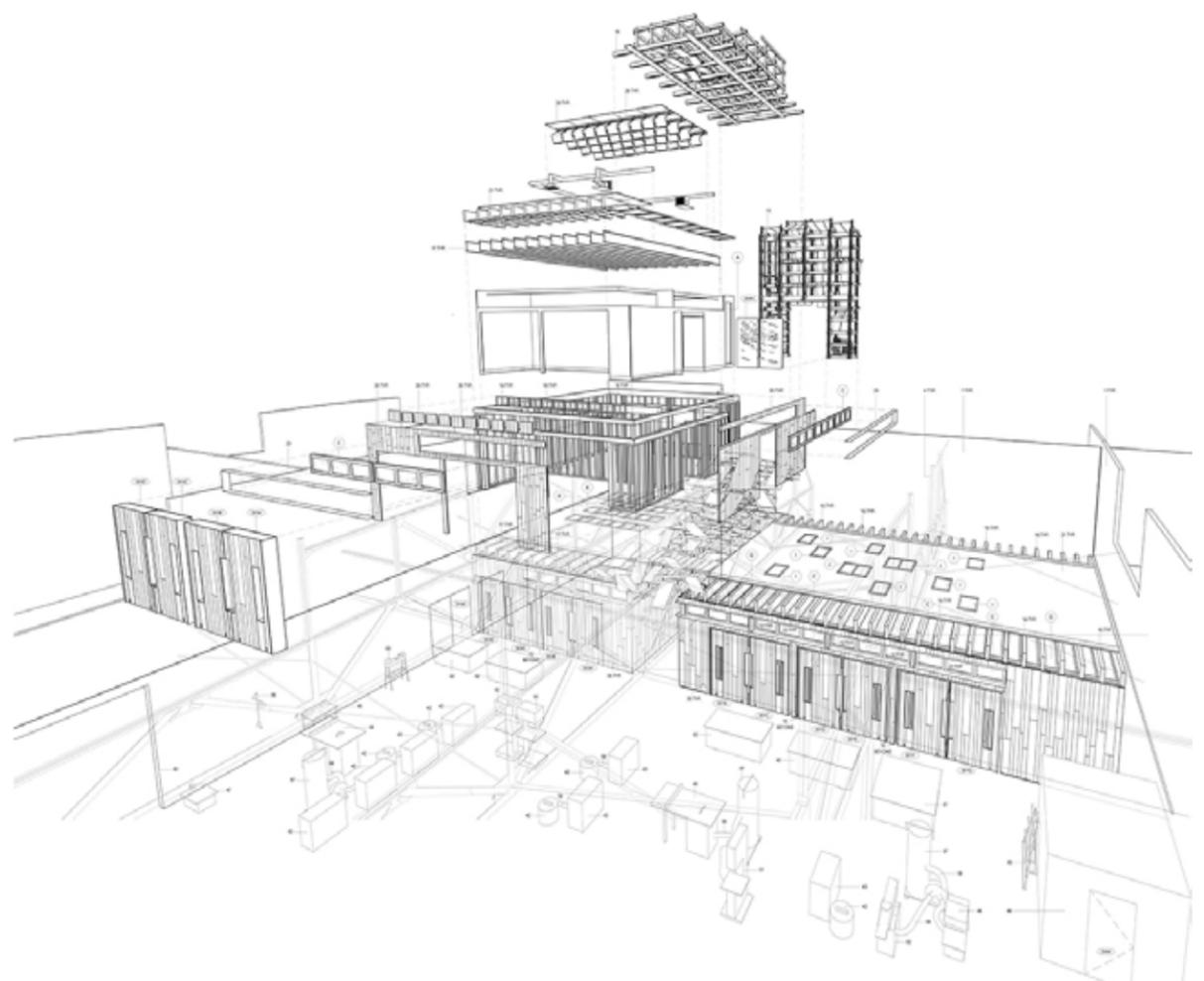


# project re

reuse materials. rebuild communities. restore lives

UDBS work is executed through PROJECT RE\_, a partnership between the UDBS, Trade Institute of Pittsburgh (TIP), and Construction Junction (CJ). The 10,000 SF off-campus space is a community workshop, job training facility, and fabrication center for value added products ranging from furniture buildings.

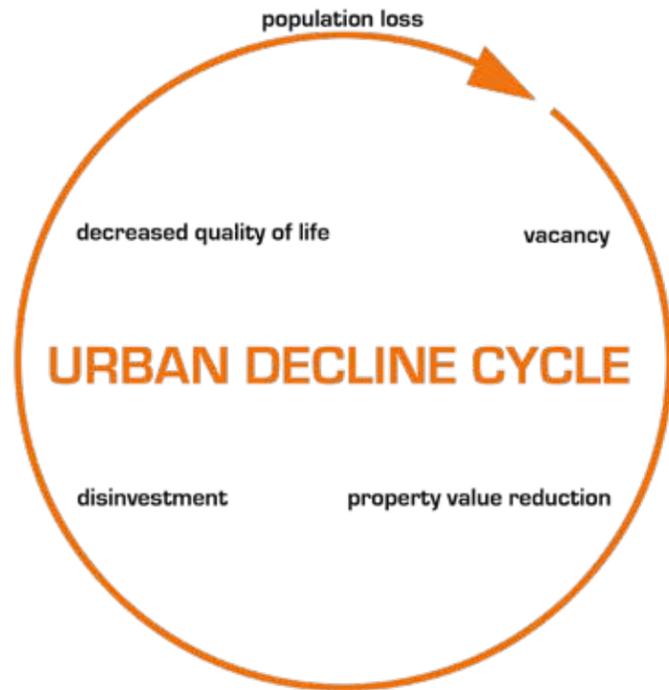
Design and construction of the facility exemplifies the typical project process. The UDBS executes design, CJ handles material supply, and TIP contributes construction trade expertise. Products and housing prototypes developed at PROJECT RE\_ will be used to sustain the center and fund future community outreach.



this page, clockwise from top: exploded perspective drawing; design review photo; construction framing; entry marquee; exterior cladding construction. opposite: View from workshop featuring reused hollow-core door entry canopy, salvaged hopper windows, and reclaimed and scrap lumber exterior cladding.

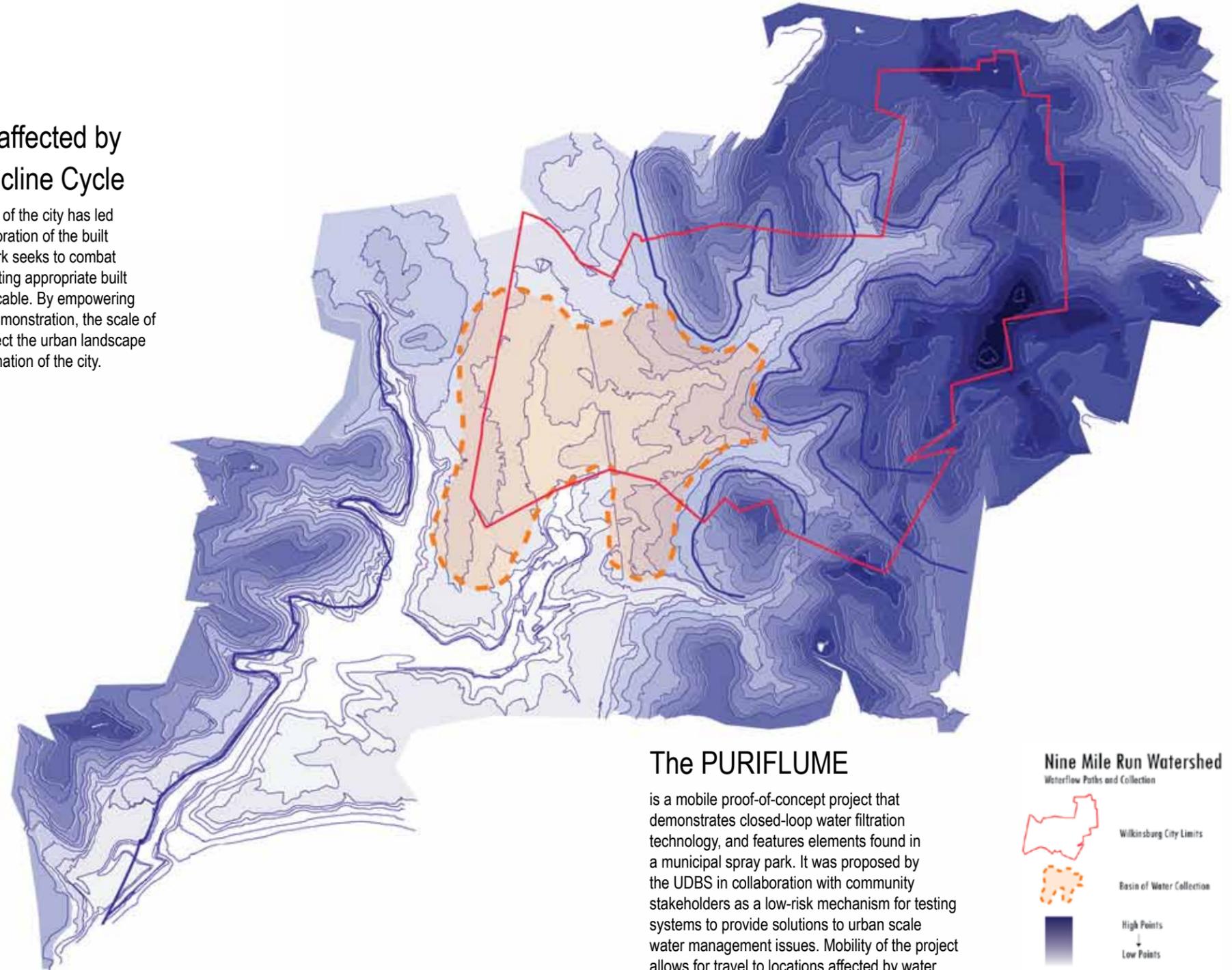
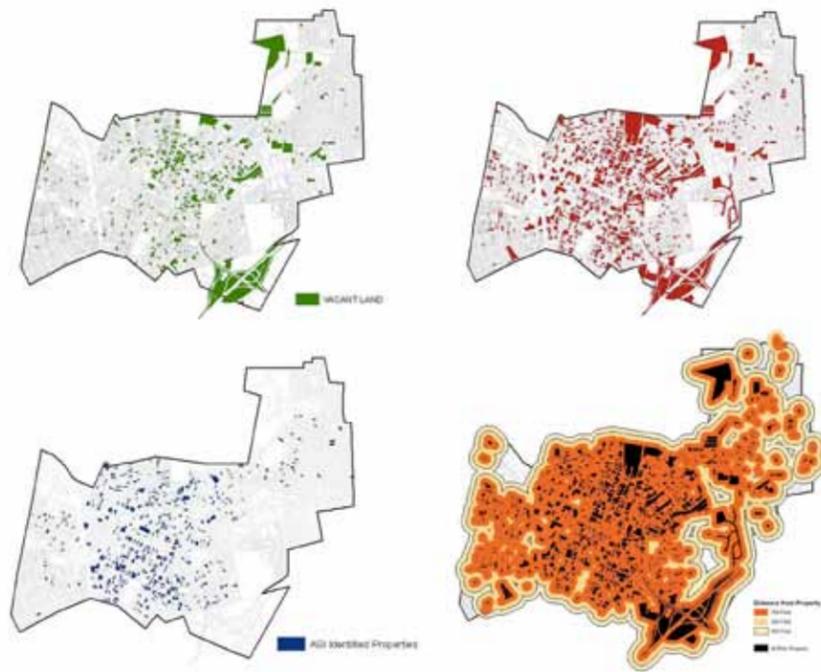
# urban

## community clients and analysis



### Pittsburgh is affected by the Urban Decline Cycle

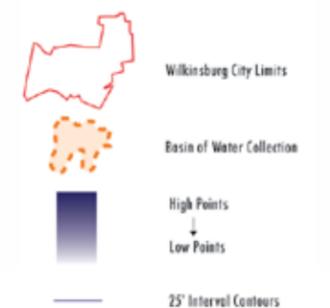
in which population loss of the city has led to vacancies and deterioration of the built environment. UDDBS work seeks to combat the Cycle by demonstrating appropriate built intervention that is replicable. By empowering communities through demonstration, the scale of change multiplies to affect the urban landscape and allow for the reclamation of the city.



### The PURIFLUME

is a mobile proof-of-concept project that demonstrates closed-loop water filtration technology, and features elements found in a municipal spray park. It was proposed by the UDDBS in collaboration with community stakeholders as a low-risk mechanism for testing systems to provide solutions to urban scale water management issues. Mobility of the project allows for travel to locations affected by water issues and educational sites.

### Nine Mile Run Watershed



Analysis of Nine Mile Run Watershed

top: Urban Decline Cycle Diagram  
bottom: Mapping of Wilkinsburg Vacant Land, ASI Properties, At Risk Properties, and 1st, 2nd, 3rd Tier Influence from at Risk Properties

# university research and **design**

## PURIFLUME Realization

was a two year effort involving 11 students that included a wide range of design, construction, procurement, and logistic experiences. Coordination was critical as they worked through iterative models and full scale prototypes prior to a rigorous 4 month build session to complete the project. Construction documents, product specifications, and an operations manual were generated to clearly communicate with external entities for consulting and inspections. Completion of the proof-of-concept project instilled confidence in the viability of water filtration systems.



# **build** catalytic projects



this page: Children playing with spray heads during the PURIFLUME opening event.  
opposite, clockwise from top: Design review photo; scale model; integrated lighting design; dry fit of structural ribs; slide installation; full-scale partial prototype.



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